MISCELLANEOUS.

121. Proposed by F. P. MATZ, Sc. D., Ph. D., Professor of Mathematics and Astronomy in Defiance College, Defiance, O.

How can we determine the elements of a cyclone from observations made at three different points?

122. Proposed by F. P. MATZ, Sc. D., Ph. D., Professor of Mathematics and Astronomy in Defiance College, Defiance, Ohio.

How should a Division of Space be made in order that the *Partional Area* may be a Minimum?

123. Proposed by F. P. MATZ, Sc. D., Ph. D., Professor of Mathematics and Astronomy in Defiance College, Defiance, O.

If a *curve* of the third degree can not be made to pass through more than six arbitrarily chosen points, why can a *surface* of the third degree be made to pass through nineteen such points?

NOTES.

THE MONTHLY is mailed on the 28th of each month and should reach its subscribers soon after that time.

The notice of the new Postal ruling which appeared in our last issue was somewhat premature. We had received a number of notices to that effect, but none of them were official.

This number of THE MONTHLY is sent to all of our old subscribers who have not yet renewed their subscriptions as well as to those who have renewed. Any one who does not wish to continue his subscription will please return this number with his name plainly written on the wrapper.

Owing to the demands on his time in the preparation of other mathematical text-books, of which the Colaw and Ellwood Arithmetics form a part, Professor Colaw's connection with THE MONTHLY will be temporarily severed. In view of this fact all contributions should be sent to B. F. Finkel until further notice is given.

We desire to thank all of our subscribers and contributors for the many kind words that have come to us to encourage us in our work. We also desire to thank all of our subscribers who so promptly responded to our notices for renewals. To renew promptly is one of the easy ways in which every one can very materially assist us in carrying on the good work of THE MONTHLY, for it should be remembered that our financial problem is one which gives us much anxiety.

Dr. William Anthony Granville, Instructor in Mathematics in Sheffield Scientific School of Yale University, has designed a plotting paper, The Polar Coördinate Plotting Paper. Every teacher of Analytical Geometry must often have felt the need of such paper. But not only is this paper serviceable to the students of Analytical Geometry and Calculus, but also in the solution of problems in Vector Analysis, Mechanics, Astronomy, and Engineering. The price of the paper is about the same as for ordinary rectangular plotting paper. Persons desiring to use this paper should write to Dr. Granville.

BOOKS.

An Elementary Treatise on the Calculus, with illustrations from Geometry, Mechanics, and Physics. By George A. Gibson, M. A., F. R. S. E., Professor of Mathematics in the Glasgow and West of Scotland Technical College. Cloth, 12mo., xix+459 pages. Price, $1.90, net. New York : The Macmillan Co.

In writing this work, the aim of the author seems to have been to prepare the student for immediately applying the principles and processes of the Calculus in any department of his studies in which the Calculus is used. With this end in view he has illustrated the applications of the Calculus by drawing on Geometry, Mechanics, and Physics. We heartily approve of this method of treating the subject. The Calculus is being studied by a larger number of students to-day than ever before, and by its making use of illustrations in such apparently unrelated subjects as Physics and Chemistry, greater interest is aroused. This book emphasizes the fact that even in such a subject as Chemistry a sound knowledge of the Calculus is of especial importance, since it is the properties of functions of more than one variable that are predominant in chemical investigations. The book closes with a short chapter on Ordinary Diflerential Equations, designed to illustrate the types of equations most frequently met with in dynamics, physics, and mechanical and electrical engineering. B. F. F.

The Groups of Steiner in Problems of Contact, by Dr. Leonard E. Dickson. Reprinted from the Transactions of the American Mathematical Society.

Representation of Linear Groups as Transitive Substitution Groups. By Dr. Leonard E. Dickson. Reprinted from the American Journal of Mathematics, Vol. XXIII, No. 4.